

Safety Evaluation Number¹: SE-W375-00-00005Revision No: 1ABCN Number: ABCN-W375-00-00005Safety Evaluation Subject: Authorization Basis Maintenance – Proceed at Risk**PART I: DESCRIPTION OF THE PROPOSED REVISION, BACKGROUND, AND SCHEDULE**

1. Describe the proposed revision (including credible failure modes, if applicable).

This revision contains two types of changes to ISMP section 3.3.3:

1. Changes to the existing Authorization Basis (AB) maintenance process required to conform with Revision 6 of RL/REG-97-13, other than those involved with decisions to deviate from the AB.

This portion of the revision redefines “Changes” to apply to changes to the “facility” and “administrative controls.” The definition of “facility” has been broadened to account for more than just design changes. Also, for all Authorization Basis (not just those related to modification or deletion of a standard cited in the SRD), the written evaluation must demonstrate that the “safety triad” is met. Also, the evaluation must demonstrate that the revision:

- will continue to conform to the original submittal requirements associated with the authorization basis document(s) affected by the revision
- will not result in inconsistencies with other commitments and descriptions contained in authorization basis or an authorization agreement.

2. Decisions to deviate from the AB (i.e., the “proceed-at-risk” process).

This portion of the revision allows BNFL Inc. to implement facility design changes at BNFL’S risk that deviate from the Authorization Basis pending both BNFL preparation and submittal of required Authorization Basis revisions and requests to amend Authorization Basis – and Regulatory Unit approval of AB amendment requests. This “proceed-at-risk” approach will apply only during the design and construction phases.

This revision does not apply to changes to the approved Quality Assurance Program (QAP) or the approved Radiation Protection Program (RPP).

2. Identify the affected Authorization Basis (AB) documents and perform a comparison and assessment of the revision against the AB.

Revises ISMP section 3.3.3, “Changes to the Authorization Basis,” to incorporate new positions in RL/REG-97-13, Rev. 6 unrelated to the “proceed at risk” concept. These positions broaden the scope of changes that must be evaluated against the AB and add provisions that ensure that BNFL Inc. will not unilaterally approve a change that violates the AB.

Revises ISMP section 3.3.3, “Changes to the Authorization Basis,” to allow BNFL Inc. to proceed at risk with implementation of changes pending preparation of safety documentation (i.e., Authorization Basis revisions and requests to amend Authorization Basis) and Regulatory Unit approval of AB amendment requests, when required.

BNFL Inc. has already experienced situations in which project work has been held up because desirable, safe and effective standards or practices were inconsistent with current requirements described in the AB. It is likely that similar situations will occur in the future, potentially leading to serious cost and schedule consequences as a result of idling designers or construction work forces while safety documentation is being developed and while Regulatory Unit review is in progress.

BNFL Inc. believes that it will be advisable, on occasion, to “proceed at risk” with certain changes that require modifications to the Authorization Basis.

This revision differs from the current AB, which requires that safety evaluations be performed of all revisions to the AB and that prior approval of the Regulatory Official be obtained before implementing any change for which a

¹ The Safety Evaluation Number shall be obtained from Project Document Control.

Safety Evaluation Number¹: SE-W375-00-00005 Revision No: 1

ABCN Number: ABCN-W375-00-00005

Safety Evaluation Subject: Authorization Basis Maintenance – Proceed at Risk

safety evaluation determines that RU approval is needed.

3. List the references used for the safety evaluation.

- BNFL-5193-ISP-01, Rev. 4b, November 9, 1999, *Integrated Safety Management Plan*, BNFL Inc., Richland, Washington
- BNFL-5193-SRD-01, Rev. 4e, November 2, 1999, *Safety Requirements Document*, BNFL Inc., Richland, Washington
- RL-REG-97-13, Rev. 5, *Contractor-Initiated Changes to the Authorization Basis*, April 19, 1999, Office of Radiological, Nuclear and Process Safety for TWRS Privatization Contractors, U.S. Department of Energy, Richland, Washington
- *TWRS Privatization Contract No. DE-AC06-96RL13308 – Mod. No. A012*, Part I, Section C, Standard 4, “Safety, Health and Environmental Program”
- Letter 00-RU-0285 from D. Clark Gibbs, Regulatory Official, DOE Office of Safety Regulation of the TWRS-P Contractor, to M. J. Bullock, BNFL Inc., “RL/REG-97-13, ‘CONTRACTOR-INITIATED CHANGES TO THE AUTHORIZATION BASIS,’ REV. 6,” April 12, 2000

4. Describe the planned revision implementation schedule.

Regulatory Unit approval: April 24, 2000.
Change implemented by May 8, 2000.

PART II: REGULATORY IMPACT OF PROPOSED AB REVISION

The following questions are to be answered as part of the safety evaluation, to determine if the proposed AB revision (and the proposed initiating change if applicable) requires prior RU approval.

- | | <u>YES</u> | <u>NO</u> |
|---|-------------------------------------|--------------------------|
| 1. Does the revision involve the deletion or modification of a standard previously identified or established in the approved SRD? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

JUSTIFICATION:

The revision modifies ISMP section 3.3.3, which is an implementing standard cited in the following SRD Safety Criteria (SC): 3.1-7, 7.3-12, 7.4-5, 9.0-4, 9.1-4 and 9.2-5.

SC 3.1-7 requires that at least every five years after the completion of the initial process hazard analysis (PHA), the PHA shall be updated and revalidated by a qualified team, to assure that the process hazard analysis is consistent with the current process. This revision does not affect the requirement to periodically update the PHA.

SC 7.3-12 requires that changes made to the Quality Assurance Program (QAP) shall be submitted annually to the regulator for review. This revision specifically excludes the QAP from its scope.

Safety Evaluation Number¹: SE-W375-00-00005

Revision No:1

ABCN Number: ABCN-W375-00-00005

Safety Evaluation Subject: Authorization Basis Maintenance – Proceed at Risk

YESNO

SC 7.4-5 is concerned with safety evaluations that document the basis for whether a change involves an Unreviewed Safety Question (USQ). Per RL/REG-97-13, safety evaluations are not required to evaluate whether a change would result in a USQ until the Production Operations Authorization has been issued. This revision applies specifically to the design and construction phases, which occur prior to issuance of the Production Operations Authorization; consequently, Safety Criterion 7.4-5 is unaffected by this revision.

SRD Safety Criterion 9.0-4 requires that the Authorization Basis be maintained current. This revision allows BNFL Inc., at its own risk, to make changes to the design or administrative controls pending revision of the Authorization Basis. BNFL Inc.'s proposed AB Maintenance program ensures that the AB will be maintained current for such "at-risk" changes by requiring expedited processing of affected revisions through issuance of Deficiency Reports (DRs) against such changes. These DRs provide a tracking mechanism that ensures proper management focus on outstanding AB revisions.

SC 9.1-4 requires that the FSAR shall be reviewed annually and updated as necessary to ensure that the information is current, remains applicable, and reflects all changes implemented up to 3 months prior to the filing of the updated FSAR. The regulatory approval of any Unreviewed Safety Questions, and the material submitted by to the regulator in support of that approval, shall be considered an addendum to the FSAR until the information is incorporated into the FSAR as part of the next periodic update. The FSAR is not approved by the RU until issuance of the Production Operations Authorization. As noted above, USQs are not required to be evaluated until after issuance of the Production Operations Authorization. This revision specifically applies only to the design and construction phases, which occur prior to issuance of the Production Operations Authorization. Consequently, Safety Criterion 9.1-4 is not affected by this revision.

SC 9.2-5 requires that all proposed revisions to technical safety requirements (TSRs), excluding its bases, shall be submitted for regulatory approval prior to implementation of the revision. Per Table S4-1 of the Contract, TSRs are not final until start of Production Operations. This revision specifically applies only to the design and construction phases, which occur prior to Production Operations. Consequently, Safety Criterion 9.2-5 is not affected by this revision.

2. Does the revision result in a reduction in commitment currently described in the AB?



JUSTIFICATION:

The portion of this revision that implements Rev. 6 of RL/REG-97-13, other than those related to decisions to deviate from the AB, add to the commitments in ISMP section 3.3.3.

The current ISMP section 3.3.3 requires that a safety evaluation be performed for all changes, whether or not they are required to be approved by the Regulatory Unit. This revision allows BNFL Inc., at its own risk, to make changes while safety documentation, including safety evaluations, is being prepared.

The current ISMP section 3.3.3 states: "Changes impacting the authorization basis that require approval of the Regulatory Unit may be implemented following approval by the Regulatory Official of a request to amend the authorization basis." This statement is a promise by BNFL Inc., in writing and on the docket, to do something (i.e., defer

Safety Evaluation

Safety Evaluation Number¹: SE-W375-00-00005 Revision No: 1

ABCN Number: ABCN-W375-00-00005

Safety Evaluation Subject: Authorization Basis Maintenance – Proceed at Risk

implementation of certain changes until receipt of RU approval) on which the RU has based a decision (i.e., approval of the ISMP) that relates to adequate safety, compliance with laws and regulations, or conformance with top-level safety standards. This revision proposes to allow BNFL Inc. to implement such changes at risk prior to approval by the Regulatory Official. This is a reduction in a commitment in the current ISMP.

YES

NO

Safety Evaluation Number¹: SE-W375-00-00005

Revision No:1

ABCN Number: ABCN-W375-00-00005

Safety Evaluation Subject: Authorization Basis Maintenance – Proceed at Risk

- | | <u>YES</u> | <u>NO</u> |
|---|--------------------------|-------------------------------------|
| 3. Does the revision result in a reduction in the effectiveness of any program, procedure, or plan described in the AB. | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

JUSTIFICATION:

The portion of this revision that implements Rev. 6 of RL/REG-97-13, other than those related to decisions to deviate from the Authorization Basis, all enhance the effectiveness of the AB maintenance program described in ISMP section 3.3.3.

The AB (ISMP section 3.3.3) describes the process of determining whether a change requires prior approval by the Regulatory Unit (RU) and the process of requesting RU approval of those changes that do require approval. BNFL Inc.'s proposal to proceed at risk with certain changes that require Regulatory Unit approval applies only to the design and construction phases (prior to introduction of chemical reagents or simulants to the main process facilities). Thus, such changes would only be permitted prior to the introduction of hazardous or radioactive material to the RPP-WTP. The proposed AB revision includes notification requirements that pertain to the construction phase to ensure that the RU is aware of all decisions to deviate from the AB within 24 hours and that the RU receives the detailed documentation that justified the decision within 72 hours. The Corrective Action Management System (CAMS) will be used to track closeout of deficiencies related to AB deviations and to focus management attention on the need to complete timely revision of the AB related to such deviations, thus ensuring that the duration for which the change lacks formal approval will be minimized. CAMS will also be used for trending purposes, thus ensuring that potential programmatic issues are identified and resolved. RU inspectors will be able to review the CAMS, such that they will be knowledgeable of any temporary misalignments between the as-built facility and the AB.

In addition, the duration of an "at-risk" condition will be minimized by expediting preparation of Authorization Basis changes. BNFL Inc. will complete the AB change documents within 30 days of its decision to deviate from the AB. The 30-day requirement for issuance of AB change documentation will be highlighted in the CAMS tracking system to ensure appropriate management attention. For those cases where the completion dates are not met, BNFL Inc. will expedite its corrective actions, as tracked by the CAMS. Similarly, if the Regulatory Official disapproves the request to amend the AB or fails to approve the amendment request within 90 days, the CAMS will ensure prompt identification and implementation of any needed corrective actions, including potential rework. In either case, all work that deviates from the AB will stop immediately. Furthermore, BNFL Inc. proposes to close any open "at-risk" changes prior to introduction of chemical reagents or simulants (during commissioning); therefore, the AB will be fully aligned with the as-designed, as-built facility well in advance of production operations. Thus, the Regulatory Unit will be fully apprised of all changes that impact the AB prior to issuance of the Production Operations Authorization.

Therefore, since (1) the RU will receive prompt notification of decisions to deviate from the AB, (2) associated AB revisions will be expedited, (3) AB deviations will be tracked by the Corrective Action Management System (CAMS), (4) CAMS will be capable of providing reports so that the status of the AB can be ascertained, and (5) all open actions related to such changes will be closed out well in advance of the Production Operations Authorization, this revision does not constitute a reduction in effectiveness of any

Safety Evaluation Number¹: SE-W375-00-00005 Revision No: 1

ABCN Number: ABCN-W375-00-00005

Safety Evaluation Subject: Authorization Basis Maintenance – Proceed at Risk

YES NO

program, procedure or plan described in the AB.

Note: Guidance on defining the terms and responding to the above questions is provided in K70C528, Code of Practice for Managing Changes to the Authorization Basis, Appendix 6.

If all the answers to the above questions are no, then the change can be made without prior RU approval.

If any of the above answers is yes, then RU approval is required prior to implementation of the AB revision (and the initiating change if applicable). An ABAR shall be prepared to obtain RU approval (see K70C528, Appendix 7.)

PART III: SAFETY EVALUATION CONCLUSION

- ☐ All PART II questions are answered No. Therefore, RU approval is NOT required prior to implementing the proposed AB revision (and initiating change where applicable).
- ☒ At least one PART II question is answered Yes. Therefore, RU approval IS required prior to implementing the proposed AB revision (and initiating change where applicable). Issuance of an ABAR is required to obtain RU approval.

Evaluator/Originator

Date

Reviewer²

Date

Radiological, Nuclear, and Process Safety Manager

Date

Chair, Project Safety Committee³

Date

RPP-WTP General Manager³

Date

² The reviewer should be a person from the same department as the Evaluator/Originator and at least as qualified as the Evaluator/Originator to conduct safety evaluations.

³ This signature required if Safety Evaluation concludes AB change can be made without RU prior approval. If RU approval (ABAR) is required, PSC and GM signatures occur on the ABAR.